

060391

LISTINGS NEWSLETTER

Newsletter of the
Long Island Sinclair/Timex
Users Group

=====
Incorporating NYTSE

Issue

MAY

1991



=====

SWAP & SHOP

EXPLOSIVE DEALS!

=====



COME TO THE SWAPMEET AT HARVEYS

183
* EXTRA *** EXTRA *** EXTRA *

ALVIN BRANDON TO BE NEW LISTING
EDITOR, SEE PAGE 2.



=====

L.I.S.T.
5 PERI LANE
VALLEY STREAM, NY
11581



TO:

DON LAMBERT JAN/92
1301 KIBINGER FL
AUBURN IN 46706-3010

FIRST CLASS MAIL
DATED MEETING NOTICE

JUN. 09

- 1 -

UPPER RIGHT
CORNER OF
YOUR LABEL
IS DATE OF
LAST ISSUE.

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+++++
LIST OFFICERS
+++++
PRES. HARVEY RAIT
PRES. ROBERT MALLOY
COR. SEC. JOHN PRIMINO
EDITOR. FRED STERN
LIBR. TOM SKAPINSKI
+++++

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MR. HARVEY RAIT
5 PERI LANE
VALLEY STREAM, N.Y. 11581

LISTING
MR. FREDERIC STERN
214 ROBERTS ST.
HOLBROOK, N.Y. 11741

NYTSE MEETS THE MONDAY AFTER
THE LIST MEETING AT:
MISS KIMS RESTAURANT
PARK AVENUE SOUTH
BETWEEN 21 ST. AND 22 ST.
MEETINGS START 7:30 PM.

JUN. 9, 1901 LIST MEETING AND
SUPPLEMENT.
JUN. 10, 1901 NYTSE MEETING
SEPT. 8, 1901 LIST MEETING.

[illegible]

ALVIN KARDONSON WILL BE THE NEW
STATION CHIEF OF THE SEARCHING FIBO
DEPARTMENT IN THE SUMMER.
THE BUREAU IS DOING A CONFIDENT
JOB ON THE WHOLE.

THE NEXT MEETING WILL BE OUR
ANNUAL MEETING. IF WE WILL BE
DISCUSSING THE MEETING THAT THE
COUNCIL IS HOLDING. WE HAVE
LISTED THE MEETING. SOME MEM-
BERS WILL BE THERE. IF NOT, I
WILL SEND TO YOU THE INITIAL TID-
BIT FOR THE MEETING. #4.00

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STONEY REPORTED THAT THE COMPUTER FESTIVAL AT MERCER COLLEGE WAS GOOD ON SATURDAY, BUT RAINED OUT ON SUNDAY. GOOD SURPLUS BUYS, BUT NOT TOO MUCH TIMEX EQUIPMENT.

ALSO REPORTED THAT THE KEN GORDEN SHOW, THE MORNING OF THE LAST MEETING (MAY 8.) HAD GOOD DEALS ON PERIPHERALS, SURPLUS, AND COMPONENTS. IE MEMORY CHIPS ETC.

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HARVEY AND BOB DEMONSTRATED A
PROGRAM FOR THE QL CALLED
(SUPER BASIC MANUAL ON DISK).
THE PROGRAM ALLOWS THE USER TO
ACCESS INFORMATION ON (KEYWORDS)
TO HELP EXECUTE PROGRAMS.
SUPERBASIC IS PROGRAMED IN HIGH
LINE NUMBER BASIC WHICH CAN BE
MERGED WITH EXISTING PROGRAMS.
THE PROGRAM IS AVAILABLE TO LIST
MEMBERS ONLY FOR $5.00 AT THE
MEETINGS. IF YOU ARE INTERESTED
SEE HARVEY OR BOB.

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HARVEY DEMONSTRATED A PROGRAM THAT HE DEVELOPED TO USE A PORTABLE ELECTRIC TYPEWRITER WITH A SERIAL PORT AS A TERMINAL FOR THE QL. THE PROGRAM ALLOWS THE TYPEWRITER TO CONTROL THE COMPUTER. THIS REPORTER SEES A POTENTIAL FUTURE OFFSHOOT OF THIS PROGRAM FOR TRANSFERRING DATA FROM A LAPTOP TO A QL. WHAT DO YOU READERS THINK?

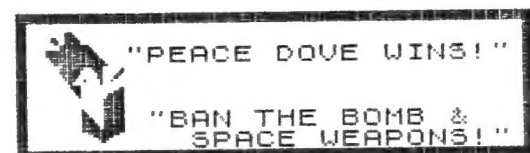
THIS CLASSIFIED SECTION IS
AVAILABLE TO ALL LIST MEMBERS
FREE OF CHARGE.
THE ONLY RESTRICTION IS THAT
IT IS TO BE USED ONLY FOR THE
SEEKING, SELLING OR SWAPPING
OF SINCLAIR, TIMEX OR MICROACE
COMPUTER EQUIPMENT, PERIPHERALS
AND SOFTWARE.
LISTING, LIST, AND ITS OFFICERS
DO NOT ENDORSE, WARRANTY, OR
GUARANTEE ANY OF THE ITEMS
LISTED IN THIS CLASSIFIED
SECTION

[illegible]

I AM LOOKING FOR A DISK DRIVE
CASE, FOR ONE OR TWO FULL HEIGHT
DRIVES, WITH POWER SUPPLY.
FRID STERN 516-737-0963.

IRISH PCC-10 BLANK TAPES AT AN
INCREDIBLY LOW PRICE. CALL TOM
516-732-1825.

Continued on page 3



Items For Sale By
Alvin Brandon

At swapmeet

\$4.00 Each:

Circuit Board Scramble
OU 3D
The Work
Crazy Bugs
Horace And The Spiders
Hungry Horace
Aqua Plane
Cybird Assault
Quadra Chart
Mterm II
Sektor 2068 (Aerco Disk Users)
ZXpert

\$2.00 Each:

Z.p Compiler
Mterm/T
Drag Master
Guardian

Oliger Eprom Programmer
for TS 2068, 1500, and 1000 \$10

TS 2068, 1500, and 1000 Machine
Language Programming and
Interfacing (Book) \$3.00

TS 2050 Modem Board
(Not Working) \$1.00

From page 2

A FINAL WORD

MY NAME IS FRED STERN AND I AM
THE EDITOR OF THIS EDITION OF
LISTING.

WELL FOLKS, THIS IS IT, MY LAST
EDITION AS EDITOR OF LISTING.
I WILL REMAIN ON STAFF TO HELP
ALVIN AND AS A CONTRIBUTING
REPORTER. I WILL SEE TO IT THAT
LISTING HAS ARTICLES FOR US
ZX-81, TS1000 AND TS1500 USERS.

THANKS TO BOB GILDER, HARVEY
RAIT, TOM SKAPINSKI, AND ALL
THOSE WHO HELPED MAKE THIS
EDITION OF LISTING POSSIBLE.

SEE YOU ALL AT THE JUNE MEETING
- SWAPMEET.

FINAL NOTE - THE NEXT ISSUE OF
LISTING WILL BE SENT OUT IN
AUGUST, BEFORE OUR SEPT. 8 MEET-
ING. HAVE A NICE SUMMER.

SUMMER FEST

HAM RADIO
and
ELECTRONICS
HAMFEST
at
BALD HILL

JUNE 30, 1991



STOP Sunday STOP
OUTDOOR
TAILGATING
FLEA MARKET



Sellers 7:00 AM
Buyers 8:00 AM

Talk-In Frequencies
WAZUEC
145.150/144.550

Food
Available

Long Island Expressway
to Exit 63 North on
North Ocean Avenue
1.3 Miles to
Town of Brookhaven Cultural Center
at BALD HILL



Donation
\$ 5.00

Sellers / Buyers

RADIO CENTRAL
AMATEUR RADIO CLUB

ITEMS FOR SALE
BY TOM SKAPINSKI
IBM DSDD DISK DRIVE. WORKS
PERFECTLY, BUT IS NOISY
PRICE ONLY TWENTY DOLLARS.

FOR SALE TAPES FOR T/S COMPUTERS
IRISH BRAND C-10 TAPES
THESE TAPES COME WITH LABELS
BUT DO NOT HAVE BOXES
--PRICE SIX FOR \$1.00--

See you all at
the swapmeet!
Bring something
to sell, or
come to get
good deals.

LETTERS Letters LETTERS Hardware Review

Van S. Vangor
Bethlehem Tool
346C Retreat Road
Island Falls Maine 04747
207-463-2835

I have the following ZX-81/TS-1000 items, surplus to my needs, for sale or trade:

- (2) 16K Memotech Rampacks, like new, docs, \$10 each.
- (1) Memotech Memocalc module, like new, docs, \$15.
- (1) Q-SAVE fast load amplifier (back panel removed) with both cassette software and EPROM firmware module, all docs, \$35.
- (1) R.A.M. 2716/2732 EPROM burner and reader (mapped 8-16K). This is a really nice board with driver software (firmware) and excellent docs which I built but never tested. Has (2) Textool ZIF sockets for burn and (4) Aries ZIF sockets for read, (2) 8255A. Has other options. Requires inexpensive power supply (like Oliger's EPROM burner power supply). Connects via short ribbon cable. I have over \$150 invested in this board- requires final adjustment, docs, \$60.
- (1) Bach Box peripheral with software. Plays organ-like music through external amplifier (not supplied). A Radio Shack mini-amp will do fine, or hook up to a hi-fi. Enter sheet music into software program and play it. Rather crude hardware with no case, but it works great, docs, \$12.
- (1) Oliger 64K Rampack with pin 1 refresh ram chips. Came off my system and works great, docs, \$40.
- (1) Zebra keyboard beeper, docs, \$10.
- (1) Zebra keyboard beeper, remapped 606 dec. for use on Oligerized system, also works on stock system, docs, \$10.
- (1) Alphacom printer in the box, bought as a spare and never used except for about a week's tryout to establish that it was in good working order, docs, \$25 + \$3 extra shipping.
- (1) Timex 2040 printer, used, very good condition, with original box \$20 + \$3 extra shipping.
- (1) Timex Demo module. This is a small circuit board that attached to a basic TS-1000 via a short ribbon cable. It has a demo program burned into a 2764 EPROM that would interest anyone with a mental age of 6 or less. A nice piece of hardware for a hacker to work with, \$12.
- (1) TI keyboard all wired up for ZX-81, extra function keys, 5" ribbon cable with DIP plug to connect to ZX-81, WITH MULE KEYTOPS, mounted on plywood board, no case, docs, extra function keytops. The Mule keytops alone cost \$16, docs, \$15.
- 4116-2 RAM chips, most with slightly shortened leads, about 90 available at \$.20 each.
- (1) Byte Back modem, fully socketed, built by myself and modified to new address in the 8-16K block, software, all docs including kluge data included. Kluging necessitated removal of the case (included) but this modem could be converted back to stock without any trouble, works fine, \$40.
- (2) Timex 16K rampacks, used (??), in original boxes, \$4 @, 2/\$7.



LETTERS

-(6) TS-1000 Rampacks all setup for the Hunter Bank Switch project in TS Horizons. The two small boards of each pack are joined together edge to edge with soldered-in 20 gage wire jumpers to make a single long (very strong) board. Each long board has the edge connector modified to provide a standard Sinclair feedthru (the toughest part of the project). The entire 6-card stack is bolted rigidly together with small threaded rod and plastic spacers. I never got more than three or four of these boards to run together. That was before I became aware of the evils of excessive bus loading. This might be cured with buffering and really should have been addressed more carefully in the article, docs, software included, \$25.

-(1) PC8300 Chinese ZX-81 Clone, unused, with original box. Has chiclet keyboard, sound capabilities, and despite all the inaccurate advertising, it will run existing ZX-81 programs ONLY if they are entirely in BASIC, \$20 + \$3 extra shipping.

-(1) 50W stereo amp board assembled. Has assembly manual that was supplied with kit versions. New, Chinese circa 1979, it cost me \$50 then and has been sitting patiently on one of my shelves ever since. Never touched, I assume it's in good working order, \$20.

-(1) 300/1200 Baud modem board made by Hayes for an OEM. Still in the anti-static pack, it has diagrams enabling one to add the 1488, 1489, and power supply that the board lacks. A first class piece of hardware, \$15.

-(1) Z-DUBBER cassette loader, aluminum battery holder corroded by leaky battery- easily replaced, otherwise ok, docs, \$10.

-(1) Zebra Talker, text to speech software, full docs, \$30.

-(1) MMRY-REZ 64k rampack by Minny Electronics, Hi-Rez capabilities, software, full docs. I didn't spend much time with this unit, but I noticed it had a tendency to crash unexpectedly. I lately noticed it was supplied with 300ns memory chips which I consider borderline at best. I will supply faster chips. (Cost \$150), \$45.

-(1) Westbridge modem built from surplus motherboard, connects to computer via surplus Mindware printer cable, homemade black plastic clamshell case (open sides) really looks nice, software, docs, \$30.

-(1) TS1000 with Filesixty rubber keyboard overlay, excellent condition, \$20 (add \$5 for 1000 ma power supply).

-(1) book: "The Complete Sinclair ZX81 & Timex TS1000 Basic Course" (small looseleaf, cost \$30), very good condition, with (2) TAPES, \$8.

Please include \$3 PER ORDER for shipping except for noted items where extra shipping is required.

(Best time to catch me by phone: Sunday morning 7:00am-1:00pm EST.)

* P.S. Fred: I will sell (1) or (2) TS1500s with 1000ma power supply, clean xeroxed manual, TV switch box and cable set for \$37 each. These units are low serial numbered, well used, but cleaned up to look almost like new (really).

PRINTING QL DISKETTE LABELS

The following program is used for printing my QL diskette labels. In the past month I have had numerous requests for this program and an explanation of how the Black Bars are printed. The original program was developed for use with my ITOH 8510A Prowriter printer with Apple Graphics. ITOH printer control codes are very different from EPSON and IBM codes, so I rewrote the program to print diskette labels from EPSON and/or IBM compatible printers. REMark statements have been added to provide an explanation of just what function the codes on each line does and if some codes differ from your printer, you should be able to delete the original codes and add those for your printer.

The original program was used for printing TS 2068 and Spectrum diskette labels and cassette labels. If you want to use this program for another Sinclair computer (TS 2068/Spectrum), delete lines 99 and 350. Change all occurrences of 'PRINT #3' to 'LPRINT' and change the 'END FOR i/a's to NEXT i or NEXT a.

As is, the program operates from an upgraded EPSON MX-80 and SEIKOSHA MP1300. Lines 120 and 125, with REMark statements are for use with the PANASONIC KX-Pl124 printer. Just delete the keyword 'REMark'. Good Printing - Bob Gilder

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90 REMark DISK LABEL - Dennison PRESS-a-ply 4" x 1 7/16" Fanfolded labels
94 CLS
95 INPUT "How many labels to be printed? ";n
99 OPEN #3, serl
100 REMark QLabS - Prints diskette labels using the EPSON MX-80 printer with
'DOTS-PERFECT Upgrade
101 PRINT #3, CHR$(27);CHR$(64);CHR$(27);CHR$(69);:REMark Printer RESET and
Emphasized Print
102 PRINT #3, CHR$(27);CHR$(120);CHR$(1);:REMark Selects Near Letter Quality
Mode
120 REMark PRINT #3, CHR$(27); CHR$(116);CHR$(1);:REMark Select Alternate
Character Set
125 REMark PRINT #3, CHR$(27);CHR$(55);:REMark Selects Graphic Character Set #1
128 FOR a=1 TO n
130 FOR i=1 TO 38
140 PRINT #3, CHR$(223);:REMark Inverse 1/2 height Block
150 END FOR i
160 PRINT #3, CHR$(27);CHR$(87);CHR$(1);:REMark Prints Double Width Characters
170 REMark :
180 PRINT #3,\ " LIST LIBRARY"\
190 PRINT #3," ASSORTED PROGRAMS "\
200 PRINT #3," NUMBER 1"\
210 PRINT #3, CHR$(27);CHR$(87);CHR$(0);:REMark Double Width printing OFF
220 PRINT #3," FORMATTED @40 TRACKS, 2 SIDES"\
230 PRINT #3," CAPACITY: 720 SECTORS:"\
240 PRINT #3," PROPERTY of LIST GROUP"\
250 PRINT #3, CHR$(27); CHR$(60);:REMark CHR$(27); CHR$(35);HOME printer head;
260 FOR i=1 TO 38
270 PRINT #3,CHR$(220);:REMark Inverse 1/2 height Block
280 END FOR i
290 REMark :
330 PRINT #3,CHR$(10); CHR$(10);:REMark Two Line Feeds to start of next label
340 END FOR a
345 PRINT #3; CHR$(27);CHR$(70);:REMark Cancels Emphasized Code

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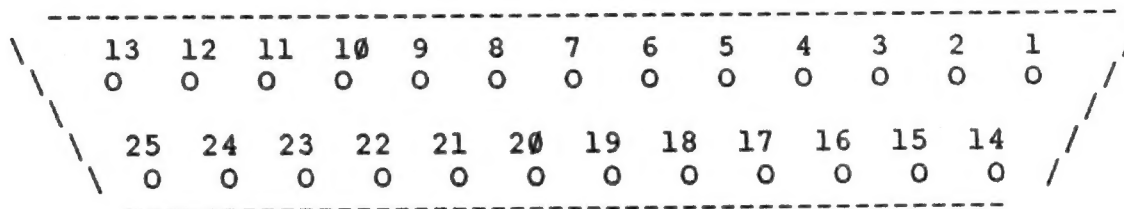
LIST LIBRARY
ASSORTED PROGRAMS
NUMBER 1
FORMATTED @ 40 TRACKS, 2 SIDES
CAPACITY: 720 SECTORS
PROPERTY of LIST GROUP

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QL SERIAL CABLE PINOUTS

The following diagrams illustrate the connector pinouts for the two connectors required for assembling an additional serial to printer/modem cable if needed. Parts are available at any Radio Shack store.



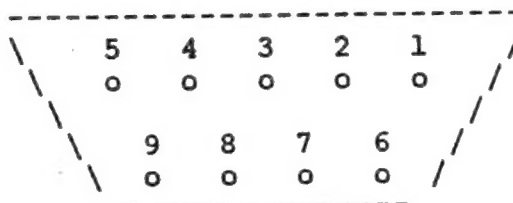
25 PIN MALE 'D' CONNECTOR
Solder pin side

CONNECTION TABLE

25 PIN 'D' CONNECTOR - TO - 9 PIN 'D' CONNECTOR

Pin numbers		Pin numbers
* Black #2	<----->	#2 TXD
* Brown #3	<----->	#3 RXD
* Orange #5	<----->	#5 CTS
* White #6	<----->	#9 DSR
* Green #7	<----->	#7 SG
* Blue #20	<----->	#4 DTR

* Wire colors of original QL Serial cable

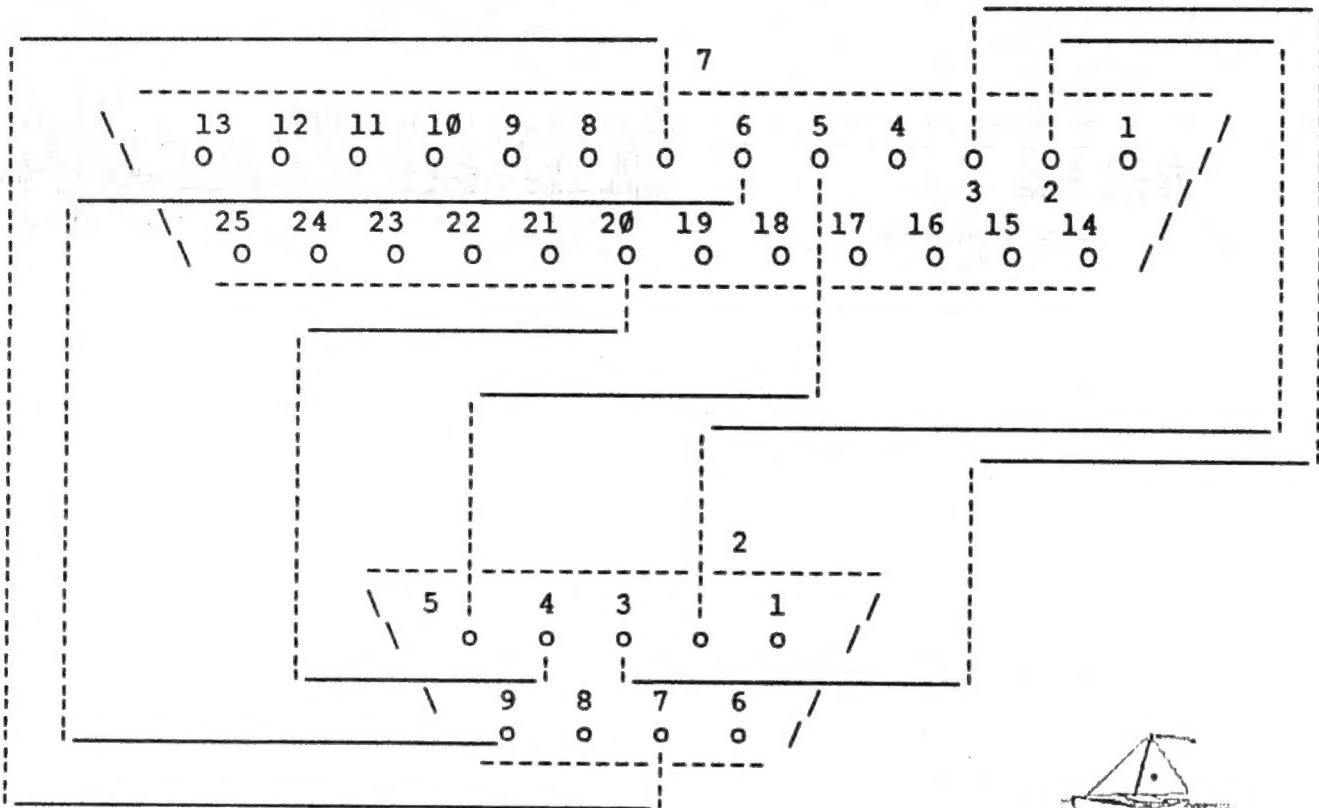


9 PIN MALE 'D' CONNECTOR
Solder pin side

TXD = Transmitted Data
RXD = Received Data
CTS = Clear To Send
DSR = Data Set Ready
DTR = Data Terminal Ready
SG = Signal Ground



SERIAL CABLE SCHEMATIC DIAGRAM



NOTE: Connectors shown from solder pin side.

PARTS REQUIRED

1 - 9 pin 'D' male connector	276-1537	\$.99
1 - 25 pin 'D' male connector	276-1547	\$1.47
1 - 9 pin connector hood	276-1539	\$.79
1 - 25 pin connector hood	276-1549	\$.89
6 ft (more or less 9 cond. cable (use only 6 conductors)	278-775	\$.59 per ft

NOTE: All parts listed use Radio Shack parts numbers.

LONG ISLAND SINCLAIR TIMEX

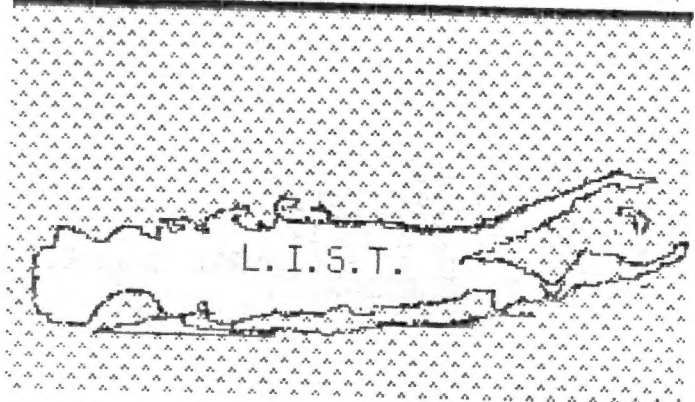
USERS GROUP PRESENTS

ZX-81 AND TS1000

TECHNICAL TIDBITS

PART II

Long Island Sinclair Timex Group



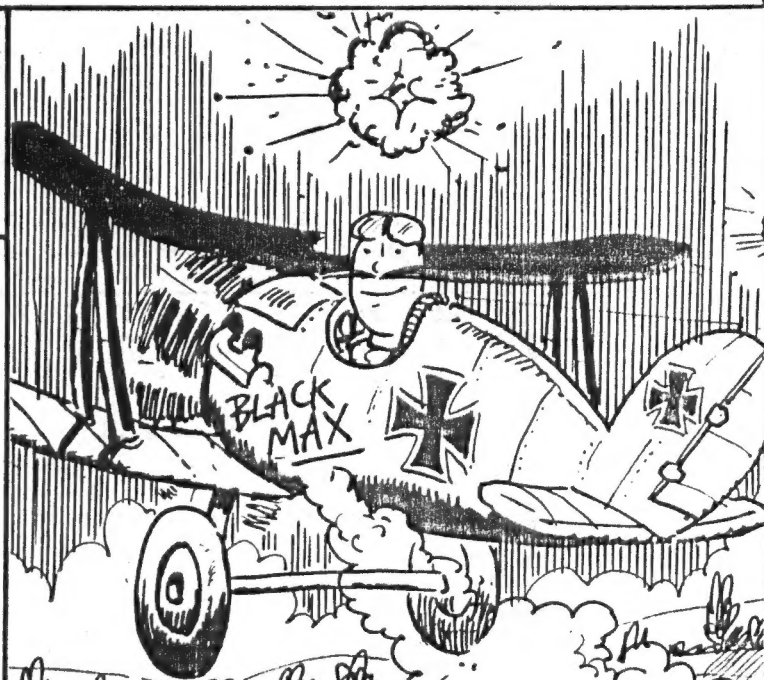
file: Serial_Cable
4/02/91

BLACK MAX

```

2 GOSUB 1000
4 GOSUB 1500
5 CLS
6 REM *MAIN ROUTINE*
10 FOR A=1 TO 75
15 LET M=INT (RND*3)+1
16 LET N=INT (RND*3)+1
18 PRINT AT X+1,Y;"      ";AT X
Y;
19 PRINT AT 10,15;"I";AT 11,13
20 PRINT AT 12,15;"I";AT 0,15;"I"
21 PRINT AT 21,15;"I";AT 11,0;"-";TAB 3
1;
20 IF M=1 THEN LET Y=Y+1
22 IF N=1 THEN LET X=X+1
25 IF M=2 THEN LET Y=Y-1
27 IF N=2 THEN LET X=X-1
30 IF M=3 THEN LET Y=Y
32 IF N=3 THEN LET X=X
40 LET X=X+(INKEY$="6" AND X<1
8)-(INKEY$="7" AND X>1)
45 LET Y=Y+(INKEY$="8" AND Y<2
6)-(INKEY$="5" AND Y>1)
50 PRINT AT X,Y,A$;AT X+1,Y,B$
60 IF INKEY$="9" THEN GOSUB 20
0
100 NEXT A
110 CLS
120 PRINT AT 2,0;" YOU WERE SHO
T DOWN FROM BEHIND BY AN ENEMY
FIGHTER          YOU REACHED
";RANK;"TH RANK"
130 PRINT "PRESS""P"" TO PLAY A
GAIN"
140 IF INKEY$="P" THEN RUN
150 GOTO 140
210 PRINT AT 11,15;"■"
220 IF X=11 AND Y=13 THEN GOTO
300
250 RETURN
305 PRINT AT 11,13;"■"
310 PRINT AT 18,12;"DIRECT HIT"
330 PRINT AT 10,14;"■";AT 11,
13;"■";AT 12,13;"■"
340 LET E=E+1
350 IF E=5 THEN GOTO 400
355 GOTO 4
400 CLS
410 PRINT AT 2,0;"      CONGRATU
LATIONS YOU HAVE      COMPLETED YOU
R MISSION AND BEEN      AWARDED A ME
DAL"
420 LET RANK=RANK+1
425 LET E=0
430 IF RANK=3 THEN GOSUB 2000
440 PRINT AT 5,0;" PRESS ""P""
FOR NEW MISSION"
450 IF INKEY$="P" THEN GOTO 4
460 GOTO 440
1000 CLEAR
1010 CLS
1030 LET RANK=0
1040 LET E=0
1050 LET A$=""
1060 LET B$=""
1100 FOR B=0 TO 21
1110 PRINT AT B,0;"■"
1120 NEXT B
1130 PRINT AT 3,10;" BLACK MAX"
1140 PRINT AT 4,10;" BY PETER BROWN";AT 1
2,1;" USE CURSOR KEYS AND (9) TO F
IRE"

```



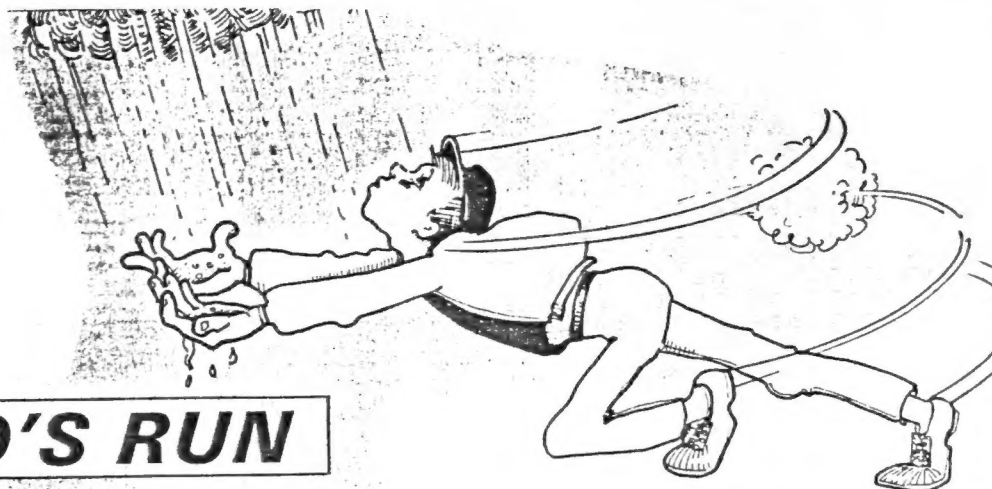
The deadly biplane, Black Max, swoops through the skies. Can you shoot it down? Use the cursor keys to move and 9 to fire when you have it in your sights.

Black Max was written for the 16K ZX-81 by Peter Brown of Oxford.

```

1140 PRINT AT 21,0;"(P) TO PLAY"
1141 FOR INSTRUCTIONS
1145 IF INKEY$="P" THEN RETURN
1147 IF INKEY$="I" THEN GOTO 120
0
1150 GOTO 1130
1210 CLS
1220 PRINT "      USING THE CURSOR
KEYS YOU      MUST MANOEUVRE THE W
EAVING      BY-PLANE INTO THE CE
NTRE OF YOURGUNSHOT AND SHOOT U
SING KEY 9      BEFORE YOU ARE HIT.T
HIS TASK      MUST BE PERFORMED 4
MORE TIMES TO      COMPLETE YOUR
MISSION AND TO      EVENTUALLY WI
N THE WAR"
1230 PRINT "      (P) TO PLAY"
1240 IF INKEY$="P" THEN RETURN
1250 GOTO 1240
1520 LET X=INT (RND*18)+1
1530 LET Y=INT (RND*26)+1
1600 RETURN
2010 CLS
2100 PRINT AT 1,0;" YOU HAVE SHO
T DOWN 15 ENEMY      FIGHTERS AND
WON MANY MEDALS      FOR YOUR BRA
VERY,      IT IS THANKS
TO MEN LIKE YOU      THAT WE HAVE
ACHIEVED VICTORY      WINS
TON CHURCHILL"
2110 PRINT AT 21,0;"P-PLAY 3-STO
P"
2120 IF INKEY$="P" THEN RUN
2130 IF INKEY$="S" THEN GOTO 220
0
2140 GOTO 2120
2200 STOP
2210 CLEAR
2220 SAVE "MAX"
2230 RUN

```



David is the security guard at a major chemical plant. A tank, containing acid, has begun to leak onto another tank beneath, which holds a dangerous gas.

To stop the acid drops before they hit the tank David must run along catching the droplets in a bucket. Use keys 5=left and 8=right.

T. Harness of Lincolnshire wrote David's Run for the 16K ZX-81.

```

1 REM 'ET'
4 LET H$='ZY-81 COMPUTER'
5 LET H$=10
8 LET Z=15
10 LET Z=0
12 CL3
14 LET B=INT (RND*30)
16 LET C=0
18 PRINT AT 24,0;

```

[illegible]

```

1 34 IF A+B=C AND C=12 THEN LET
2 35 GOTO 20
3 36 GOTO 3
4 37 PRINT AT 2,2,"YOU ARE DEAD"
5 38 GOTO 3
6 44 PRINT AT 4,2,"OUR SCORE IS"
7 45 PRINT AT 8,2,"PLEASE ENTER"
8 46 PRINT AT 8,2,"YOUR NAME"
9 49 IF IN$ THEN INPUT A$
10 49 IF IN$ THEN LET H$=A$
11 50 PRINT AT 8,2,"HIGH SCORE IS"
12 51 H$
13 52 IF IN$ THEN LET H$=I
14 54 PRINT AT 8,2,"NEW SCORE IS"
15 55 H$
16 56 PRINT AT 8,2,"FOR ANOTHER GO ARE"
17 57 "KEY"
18 59 IF INKEY$="" THEN GOTO 58
19 60 GOTO 3

```

[illegible]

```

0000000000000000
  20 REM 100 CHARACTERS IN LINE
10

```

```

30 LET A=16514
40 LET B$="2A0C40230E1506207EF
E002002036502310F62300020F0092A0C4
703030E167E03081F5687232310F9287F
7022300C20E0099010E022A0C400954010
70222A0C40099540010E022A0C40099E0B
30A00C4001220009052036002310FBC90
00000000"

```

```
50 POKE A,16*CODE A$+CODE A$(2
```

```

60 LET A=A+1
70 IF A=16607 THEN GOTO 100
80 LET A$=A$(3 TO )
90 GOTO 50
100 SLOW

```

```

100 SLOW
110 PRINT AT 21,0;"DATA OK..."
120 PRINT AT 0,0;"NOTE DO NOT E
DIT OR DELETE          TRAILING CHAR
ACTERS IN LINE 10     OR THE MACHIN

```

```

ACTERS IN LINE 10
E CODE WILL CRASH"
130 POKE 16510,0
140 PRINT AT 10,
0;"LINE ONE NOW

```

```

LINE 0"
150 STOP
9000 SAVE "M"
9010 FAST
9020 LIST

```

The aliens are here! Shoot them down before they land. Move left with key A, right with key D and fire with J.

Not the most original of scenarios, but this version of Alien Lander incorporates a machine code scroll, making it fast-moving. Enter listing one, which is the machine code loader, followed by listing two.

Alien Lander was written for the 16K ZX-81 by Andrew Pitcher of Dursley, Gloucestershire.

Listing 2

```

      QREH EERN07: -40 71 PLOT 781
LIST TAN EERN07: -771 RAND F277$
4 INPUT TAN CHR$ EERN07: 770 EE
RND GOSUB EERN06 -40 71 CLS
TAN

```

```

10 LET PAPER=16514
20 LET INK=153
30 LET LINE=16418
40 LET LEFT=16537
50 LET DOWN=16552
60 LET CODE=PEEK 16395+255*FREE
16397+1
70 LET SCORE=0
80 LET HIGH=0
90 LET SHIP=3
94 POKE 16524,00
95 LET ALIEN=0
96 GOSUB 500
100 LET MOVE=3
110 POKE LINE,0
120 POKE LINK,123
130 LET DRAW1=28
140 LET DRAW2=INT (RND*10)+1
150 PRINT AT DRAW2,DRAW1

```

```
160 FOR I=0 TO INT (RND*20)
170 PRINT AT 22,MOVE;"
```

```

180 IF INKEY$="A" AND MOVE=3 TH
EN LET MOVE=MOVE-1
190 IF INKEY$="D" AND MOVE=23 T
HEN LET MOVE=MOVE+1
200 IF INKEY$="J" THEN GOTO 700
210 LET SCROLL=USR LEFT
220 NEXT I
230 FOR J=DRAW2 TO 22
240 PRINT AT 22,MOVE;

```

```

250 IF INKEY$="A" AND MOVE=3 TH
EN LET MOVE=MOVE-1
260 IF INKEY$="D" AND MOVE=23 T
HEN LET MOVE=MOVE+1
270 IF INKEY$="J" THEN GOTO 300
300 LET SCROLL=USR DOWN
310 NEXT J
320 LET ALIEN=ALIEN+1
330 IF ALIEN=3 THEN GOTO 350
340 GOTO 140
350 FOR I=0 TO 5
360 NEXT I
370 CLS
380 RAND USR PAPER
390 PRINT AT 10,7,"NEVER GIVE

```

```

400 LET SHIP=SHIP-1
410 IF SHIP=0 THEN GOTO 2000
420 FOR I=0 TO 30
425 LET ALIEN=0
430 NEXT I
440 CLS
450 GOTO 140

```

Alien Lander

Enlarged Character Modes - 2068

The ability to print characters larger than normal size, easily and rapidly, could substantially enhance the text and graphical displays of many programs. I created the following machine code routine, and associated procedures, with this ability in mind. The routine allows printing of three enlarged character modes from BASIC...

Regular Characters

Mode 2 Characters

Mode 1 Char\$

Mode 3 Char\$

MODE	HIEGHT	X	WIDTH	MAXIMUM CHAR/LN
1	1	x	2	16
2	2	x	1	31
3	2	x	2	16

Printing these character modes from BASIC will entail creating and SAVEing a two line BASIC program (which includes machine code in a REM statement). Then, you can either MERGE it with an existing program or create a new program around it. With these two lines resident in a program you 'Print' the enlarged modes using the following procedure...

```
POKE 23728,line
POKE 23729,column
POKE 23730,mode
RANDOMIZE USR FN a()
REM "char string"
```

...Just POKE the values for the mode you desire, and the line and column at which you want printing to start, into the appropriate addresses. Then call the MC routine using the RANDOMIZE USR statement followed directly by a REM statement with

your string enclosed in quotes. You can think of this procedure as a hypothetical BASIC statement...

```
PRINT MODE n; AT ln,cl;"string"
```

Line and column values are the same as normally used but when referring to the enlarged modes you are specifying the start position for the upper, leftmost portion of the character. For instance; if line=2, column=2, mode=3, and string="XTEST"...

```
column
23456789
line 2
line 3XTEST
```

To create the routine, input the loader program below and RUN it...

```
1 REM XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2 DEF FN a()=PEEK 23635+256*P
EEK 23635+5
10 LET x=0: LET sum=0
14 ON ERR GO TO 70
20 INPUT a$
25 LET dec=VAL a$
30 POKE FN a()+x,dec
35 PRINT a$;" "
40 LET x=x+1
50 LET sum=sum+dec
60 GO TO 20
70 ON ERR RESET
75 PRINT
80 PRINT "sum=";sum
```

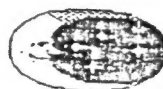
[illegible]

You will notice that a manual or automatic attempt at LISTing the line 1 REM statement causes a spurious error report. This occurs because the MC code contains values that the system uses for color code markers. This causes annoying interference with program development and editing. Luckily we can circumvent the problem by doing the following...

353 = 34855

1. LIST 2
2. POKE 23680,30
3. Avoid the following...
 - a. LIST
 - b. LIST 1
 - c. Moving the edit cursor onto line 1

Also, a few words of caution: I included no error trapping in the mc routine. Line and column values out of range could be disastrous, mode values other than 1-3 default printing to mode 0. Wraparound printing was not explicitly designed into the code. Mode 1 will usefully exhibit this behavior, the others will not.



When you've entered the last decimal code, input an "e"; the program will respond by printing a value called "sum". It should equal 34.965. If it doesn't, you will have to reinput the codes. If you got the correct value, delete program lines 10 through 200 and program lines 1 through 200. With lines 1 and 2 still redefined in the computer, you were ready to experiment with the procedure outlined earlier for generating the enlarged characters. But before you do,

LONG
ISLAND GROUP
Sinclair
TIMEX